

WHAT IS CLAIMED IS:

1. A substrate process chamber component
5 comprising:
at least one internal component formed from
anodized aluminum alloy; and
a yttrium oxide coating formed on a surface of
the at least one internal component.
- 10 2. A substrate process chamber component as in
claim 1, and wherein the at least one internal component is
a chamber liner.
- 15 3. A substrate process chamber component as in
claim 1, and wherein the at least one internal component is
a cathode liner.
- 20 4. A substrate process chamber component as in
claim 1, and wherein the at least one internal component
comprises a chamber door.
- 25 5. A substrate processing chamber component as in
claim 1, and wherein the anodized aluminum alloy
comprises anodized high purity aluminum alloy.
- 30 6. A method of manufacturing a substrate process
chamber component, the method comprising:
providing at least one internal component for
utilization in a substrate process chamber, the at least

one internal component formed from anodized aluminum alloy; and

applying a yttrium oxide coating to a surface of the at least one internal component .

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7. A method as in claim 6, and wherein the yttrium oxide coating is applied by plasma spraying.

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8. A method as in claim 6, and further comprising: performing a finishing step on the yttrium oxide coating.

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9. A method as in claim 8, and wherein the finishing step comprising:

manually holding a grinding tool on the yttrium oxide coating.

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10. A method as in claim 8, and further comprising: performing a cleaning step on the finished yttrium oxide coating.

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11. A method as in claim 11, and wherein the cleaning step comprises:

CO₂ snow cleaning the yttrium oxide coating;

and

rinsing the yttrium oxide coating using deionized (DI) water.

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12. A method as in claim 6, and wherein the anodized aluminum alloy is anodized high purity aluminum alloy.